Claims

1. A method for producing a quartz glass blank, comprising a method step in which SiO_2 particles are produced by means of a row of deposition burners and deposited on a cylinder outer surface of a carrier rotating about the longitudinal axis thereof to form a cylindrical porous SiO_2 soot body, the surface temperature of the forming soot body being altered by means of a temperature adjustment body, characterized in that the temperature adjustment body is used in the form of a planar element (13; 31) extending along a substantial part of the SiO_2 soot body (2), which either as a homogeneous heat sink has a temperature-shielding effect on the soot body surface (10) or, as a homogeneous reflector, a temperature-raising effect due to heat radiation.

2. The method according to claim 1, characterized in that a planar element (31) is used that is formed by an inner wall of a housing (30) surrounding the SiO_2 soot body (2).

3. The method according to claim 1 or 2, characterized in that the planar element (13; 31) acts as a reflector with a reflectance for IR radiation between 80% and 100%.

4. The method according to claim 3, characterized in that heat of the deposition burners (5) is reflected towards the soot body (2) by means of the planar element (31).

5. The method according to claim 3, characterized in that heat of the forming SiO_2 soot body (2) is reflected by means of the planar element (13) towards the soot body surface (10).

6. The method according to any one of the preceding claims, characterized in that the planar element has an efficiency, defined as the solid angle covering the forming SiO_2 soot body, of at least 60%.

7. The method according to claim 1 or 2, characterized in that the planar element acts as a heat sink absorbing IR radiation.

8. The method according to claim 7, characterized in that a planar element is used that has a roughened surface having a mean surface roughness R_a of at least 10 µm.

9. The method according to claim 7 or 8, characterized in that a planar element is used that has a blackened surface.

10. The method according to any one of claims 7 to 9, characterized in that the planar element is cooled.

11. The method according to claim 1 and any one of claims 3 to 10, characterized in that the planar element is moved along the soot body (2).

12. The method according to claim 1 and any one of claims 3 to 11, characterized in that the distance between the planar element (13) and the surface (10) of the forming SiO_2 soot body (2) is kept constant.

13. The method according to any one of the preceding claims, characterized in that the planar element (13; 31) extends over the whole usable length of the soot body (2).

14. A device for carrying out the method according to any one of the preceding claims, comprising a row of deposition burners for producing SiO_2 particles, a carrier which is rotatable about the longitudinal axis thereof and on the cylinder outer surface of which the produced SiO_2 particles are deposited to form a cylindrical porous SiO_2 soot body, comprising at least one temperature adjustment body which is arranged in the area of the forming soot body and which acts on the surface temperature of the forming soot body for altering an axial density profile, characterized in that the temperature adjustment body comprises a planar element (13; 31) which acts as a homogeneous heat sink or as a homogeneous reflector and which extends along a substantial part of the SiO_2 soot body (2) and has a predetermined reflectance for IR radiation.

15. The device according to claim 14, characterized in that the planar element (31) is formed by an inner wall of a housing (30) surrounding the SiO_2 soot body (2).

16. The device according to claim 14 or 15, characterized in that the planar element (13; 31) for IR radiation has a reflectance between 80% and 100%.

17. The device according to claim 16, characterized in that the planar element (13; 31) has a concave curvature (7; 33).

18. The device according to claim 16 or 17, characterized in that the concave curvature (33) has a focal point (34) which is located in the area of the row of deposition burners (5).

19. The device according to claim 16 to 17, characterized in that the concave curvature (7) comprises a focal point (14) which is located in the area of the forming SiO_2 soot body (2).

20. The device according to any one of claims 14 to 19, characterized in that the planar element comprises a surface absorbing IR radiation.

21. The device according to claim 20, characterized in that the planar element is roughened and has a mean surface roughness R_a of at least 10 µm.

22. The device according to claim 20 or 21, characterized in that the planar element has a blackened surface.

23. The device according to any one of claims 20 to 22, characterized in that the planar element is provided with a cooling device.

24. The device according to claim 14 and any one of claims 16 to 23, characterized in that the planar element is made movable along the soot body.

25. The device according to claim 14 and any one of claims 16 to 24, characterized in that the planar element (13) is made displaceable in a direction perpendicular to the longitudinal axis (3) of the carrier.

26. The device according to any one of the preceding claims 14 to 25, characterized in that the planar element (13; 31) extends over the whole usable length of the soot body (2).